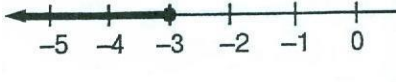



1. Which is the solution for the equation $-16 = x + 4$ a) -20 b) -12 c) -4 d) -8
2. Which equation has the solution $p = 7$?
a) $5p + 6 = -29$ b) $7p + 1 = 49$ c) $-6p + 8 = -34$ d) $\frac{2p + 4}{4} = 4$
3. Which equation does not have the same solution as the others?
a) $\frac{3r}{2} = 6$ b) $\frac{r + 6}{2} = 5$ c) $3(r + 4) = 24$ d) $5r - 6 = 19$
4. Solve: $1.2b + 2.6 = 10.1 - 1.3b$ a) $b = 0.3$ b) $b = 3$ c) $b = -3$ d) $b = -0.3$
5. Solve: $\frac{x}{4} + \frac{11}{2} = \frac{7}{4}$ a) $x = -4$ b) $x = -60$ c) $x = -8$ d) $x = -15$
6. For which value of t does $4.5 + t = -9.7$? a) 5.2 b) -5.2 c) -14.2 d) 14.2
7. If $4(y + 7) = -8$, which is the value of $y + (-6)$? a) -9 b) -15 c) -11 d) -5
8. If $\frac{x + 5}{2} = \frac{x + 6}{3}$, which is the value of x ? a) -1 b) -2 c) -3 d) -4
9. Which equation has the correct solution given?
a) $\frac{a}{2} + 3 = -8$ b) $-4b + 2 = -10$ c) $2c - 6 = -12$ d) $2(d - 4) = -10$
a = -10 b = 2 c = -3 d = 1
10. Solve. $6n - 3 < 21$ a) $n < 3$ b) $n > 4$ c) $n < 4$ d) $n > 3$
11. If $-3n + 2 \leq 8$, which shows the value of n ?
a) $n \geq 2$ b) $n \leq 2$ c) $n \leq -2$ d) $n \geq -2$
12. Which inequation represents the graph?

a) $n < -3$ b) $n \leq -3$
c) $n > -3$ d) $n \geq -3$
13. Which graph shows the solution for the problem $7n + 2 \geq 16$?

14. Solve for x and express your answer in set notation:
 $2(x + 8) > 4(3 + x)$
a) $x < 2$ b) $x < 4$ c) $x > 2$ d) $x > 4$
15. Solve for the unknown variable:
 $9m - 3 \leq 3(m - 4)$
a) $m \leq \frac{-1}{6}$ b) $m \geq \frac{-1}{6}$ c) $m \geq \frac{3}{2}$ d) $m \leq \frac{-3}{2}$
16. Solve for the unknown variable:
 $\frac{1}{2}(2 + 5x) \geq \frac{2}{3}(15 - 3x)$
a) $x \leq \frac{9}{8}$ b) $x \geq \frac{9}{8}$ c) $x \geq 2$ d) $x \leq 2$
17. An equipment rental company charges a flat rate of \$24, plus \$14 per day for insurance. Kyle has \$155. Write an inequality to represent the number of days, d , for which he can rent equipment.
a) $24 + 14d \leq 155$ b) $24 + 14d < 155$ c) $24 + 14d \geq 155$ d) $24 + 14d > 155$
18. When 13 is subtracted from the product of a number and 5, the result is 27. Find the number.

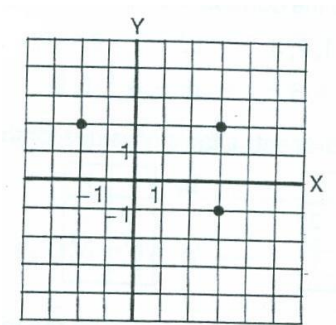
19. The length of a rectangular swimming pool is 16 m greater than its width. The perimeter of the pool is 120 m. What is the length of the pool?
20. Jake is thinking of a number. If you divide his number by 4, then subtract 12, the result is -3. What is Jake's number?

21. Which ordered pair belongs to the relation $y = -2x + 5$?
- a) (2,1) b) (2,-9) c) (2,-1) d) (2,9)

x	Y
1	7
2	12
0	2
3	17

22. Which is the rule for the relation shown by the table of values?
- a) $y = 5x + 2$ b) $y = x + 6$ c) $y = 4x + 5$ d) $y = x + 2$

23. The coordinates of three vertices of a rectangle are shown. What are the coordinates of the fourth vertex?
- a) (2,1) b) (2,-1) c) (-2,1) d) (-2,-1)

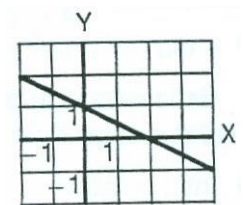


24. Which ordered pair does not belong to the relation $y = x - 1$?
- a) (0,-1) b) (0,1) c) (1,0) d) (2,1)

25. In the relation $y = \frac{1}{3}x + 3$, x can have values -6, -3, 0, 3, 6. Which are the corresponding values of y?
- a) -1,0,1,2,3 b) -5,-6,-7,-8,-9 c) 1,2,3,4,5 d) 5,6,7,8,9

26. Which represents an equation for the relation?

- a) $y = x - 2$ b) $y = 2x + 1$ c) $y = -\frac{1}{2}x + 1$ d) $y = -x + 1$

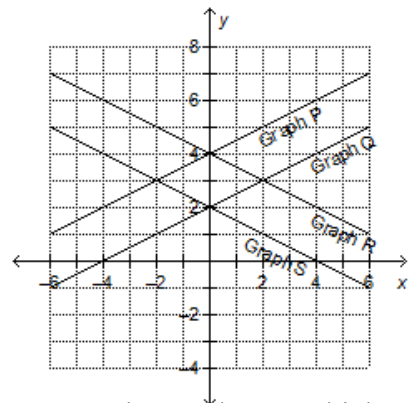


27. Which represents an equation for the relation?

- a) $y = x + 2$ b) $y = x + \frac{3}{2}$
- c) $y = 2x + 1.5$ d) $y = \frac{3}{2}x + 2$

x	y
-1	0.5
0	2
1	3.5
2	5

28. Which graph on this grid has the equation $x + 2y = 4$?
- a) Graph Q b) Graph P
- c) Graph S d) Graph R



29. “When 3 is added to twice the x value, the result is the same as the y value.” Which equation shows this relation?

- a) $y = 2x + 3$ b) $2y = x + 3$ c) $y = 3x + 2$ d) $y = 3x - 2$

30. Which equation represents the following relation?

x	1	2	3	4	5
y	4	7	12	19	28

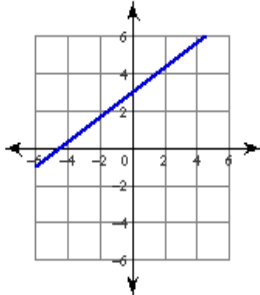
- a) $y = 3x + 1$ b) $y = 4x + 3$ c) $y = 3x$ d) $y = x + 1$

31. Plot each point on a Cartesian coordinate system. Which points are on the x axis? **Circle multiple answers.**

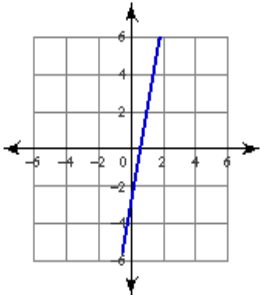
- a) (-2,0) b) (0,0) c) (0,-3) d) (5,0) e) (-4,-3)

32. Graph $y = \frac{2}{3}x - 3$

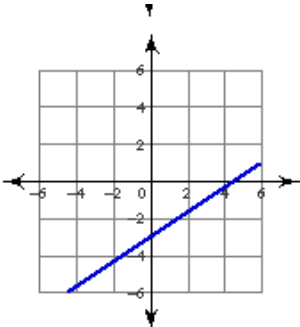
A)



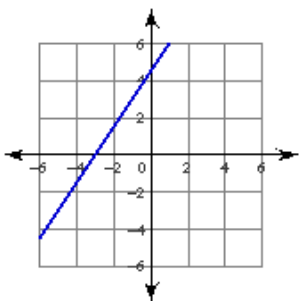
B)



C)

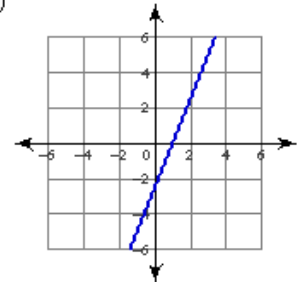


D)

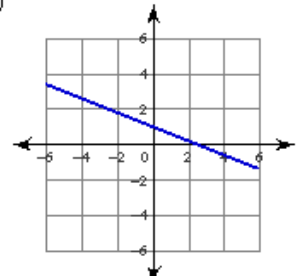


33. Graph $2x - 5y = 5$

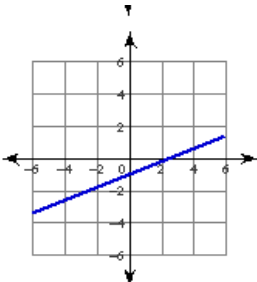
A)



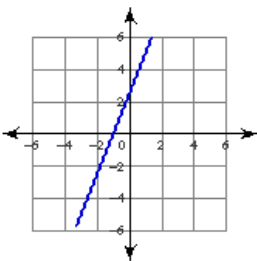
B)



C)



D)



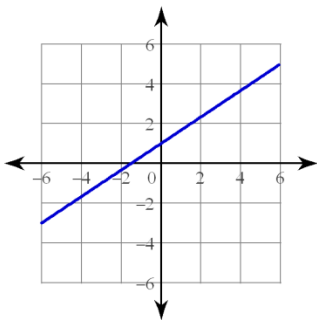
34. **True or False.** The point (-3,10) lies on the line $y = -4x + 2$.

35. Which choice best describes the line defined by the equation $y = -4x + 2$?
(*Hint: graph the line first.*)

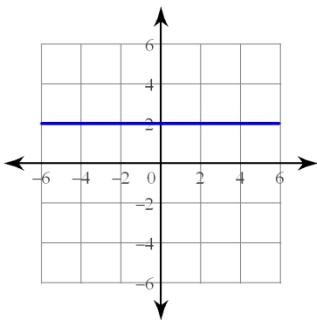
- a) rising to the right b) falling to the right c) horizontal d) vertical

36. Which of the following lines is represented by the equation $x=2$?

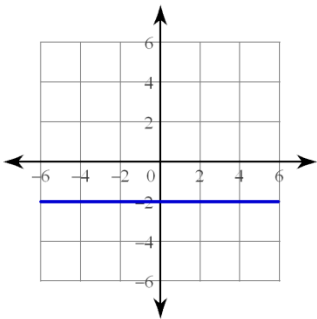
A)



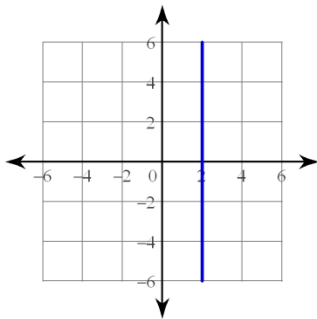
B)



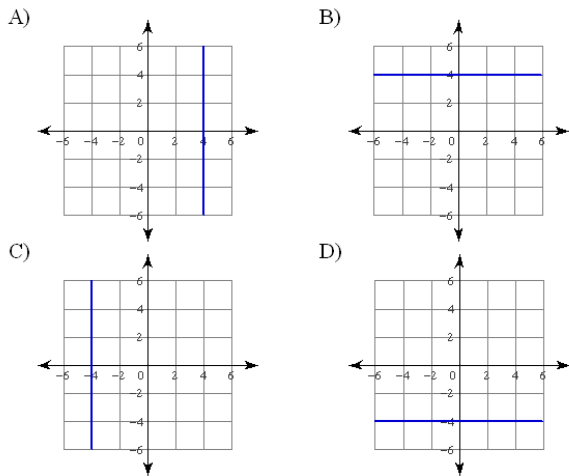
C)



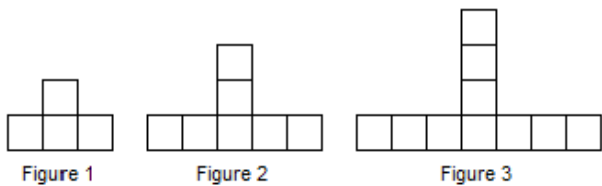
D)



37. Choose the graph for the line with equation $y=-4$.



38. This pattern of unit squares continues. Which equation below relates the number of squares, n , to the figure number, f ?

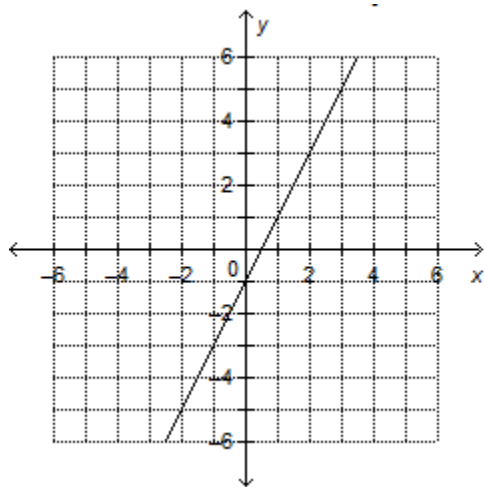


- a) $n = 3f + 4$ b) $n = 3f + 1$ c) $f = 3n + 1$ d) $f = 4 + 3n$

39. The cost to rent a piece of equipment is \$24, plus \$8.27 per hour. Calculate the cost of renting the equipment for 6 h.

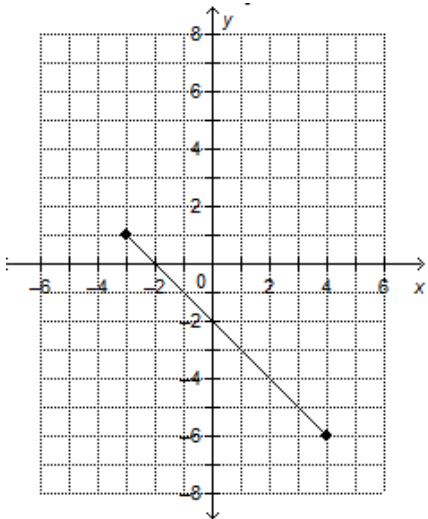
- a) \$1190.88 b) \$73.62 c) \$193.62 d) \$38.27

40. This graph represents a linear relation. Determine the value of x when $y = -2$.



- a) -1 b) -0.5
c) 0.5 d) -1.5

41. This graph represents a linear relation. Determine the value of y when $x = -5$.



- a) 7 b) 3 c) 1 d) 2

42. A car travels at a constant speed. The graph shows how the distance of the car changes with time. Estimate the time it takes to travel 270km.

- a) 1 h b) 12 h
c) 11 h d) 13 h

